Pom-Pom Popper

Create a festive popper and learn about transfer of energy.

Kit contains:

- 1 Cardboard tube (toilet paper or paper towel roll)
- 1 Balloon
- Several small pom-poms

You will need: scissors and coloring supplies to decorate.

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INSTRUCTIONS

Step 1. Decorate your cardboard tube (optional).

Step 2. Tie a knot in the end of the balloon. Then, cut off the very top of the balloon.

Step 3. Pull the cut balloon over the end of the cardboard tube.

To launch: Put the pom-poms into the popper. Pull the knot of the balloon and let go. The pom-poms should burst out of the open end. Hooray!

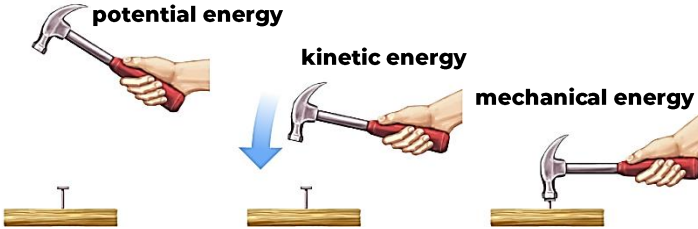
TRY THIS!

- Pull the balloon knot out far or just a little bit. How does that change where the pom-poms go?
- Use your popper to celebrate New Year's Eve or other special events!

- Put other small, lightweight objects in your popper, such as confetti. (Help clean up afterwards if you do this!)

WHAT'S GOING ON?

Your pom-pom popper is showing you **transfer of energy.** First, you have energy in the muscles of your hand and arm and that allows you to pull the balloon knot down. Now your popper has **potential energy** – energy that is waiting to be used. When you let go, you've transferred the energy from your arm/hand to the balloon and then to the pom-poms. It's now **kinetic energy** – energy of movement – and it sends the pom-poms flying in the air! Both potential and kinetic energy are types of **mechanical energy**.



LEARN MORE ABOUT IT!

Books (Available at MGPL):

- *Kinetic and Potential Energy: Understanding Changes within Physical Systems* by Jennifer Viegas
- *Forces Make Things Move* by Kimberly Brubaker Bradley
- *Energy Makes Things Happen* by Kimberly Brubaker Bradley
- *Motion* by Grace Hansen
- *Energy* by Joseph Midthun
- *Experiments with Forces and Motion with Toys and Everyday Stuff* by Emily Sohn